Fig. 1A

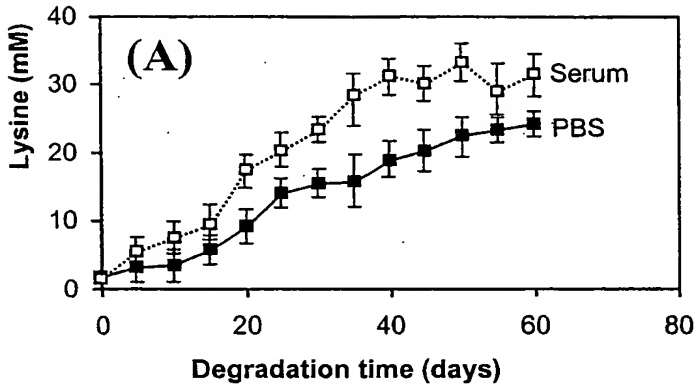
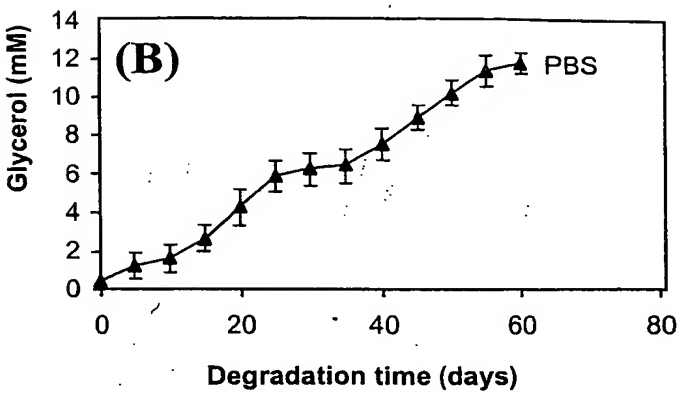


Fig. 1B



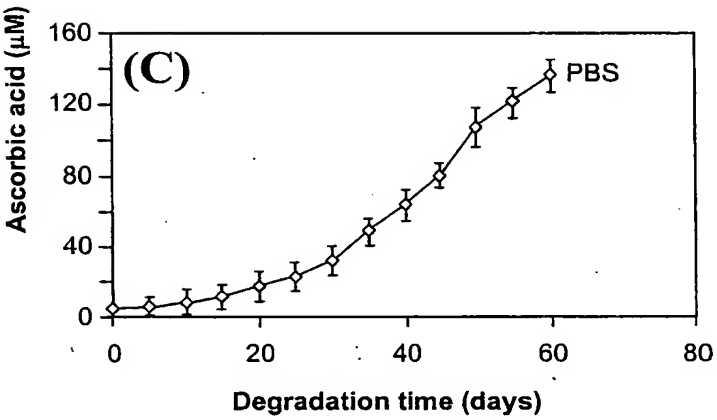


Fig. 1C

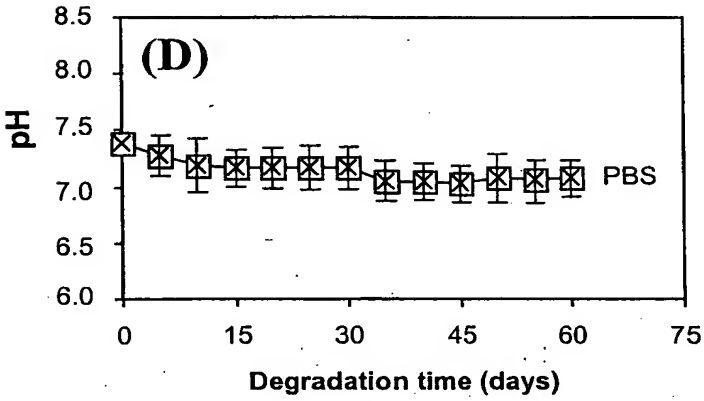


Fig. 1D

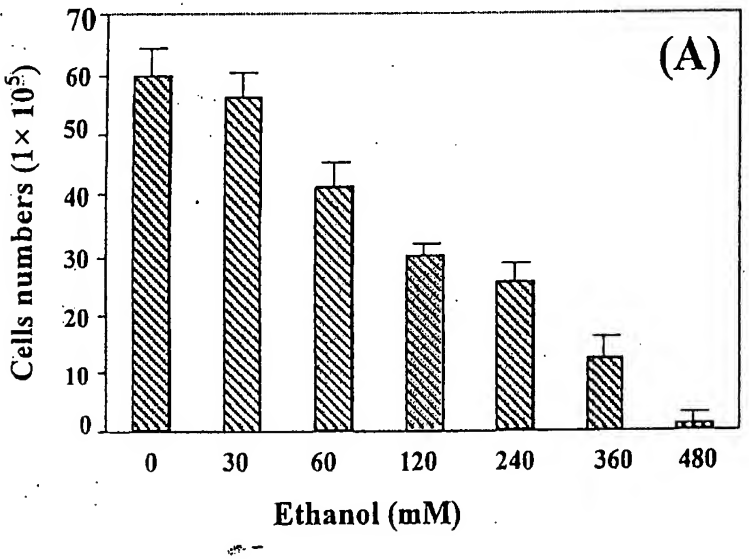

(A)
Cells numbers (1× 10^5)
70
60
50
40
30
20
10
0
0
30
60
120
240
360
480
Ethanol (mM)

Fig..2A

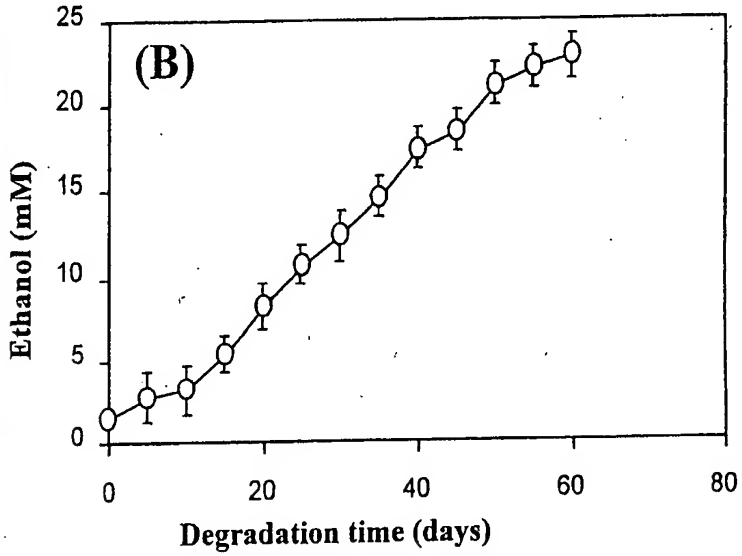
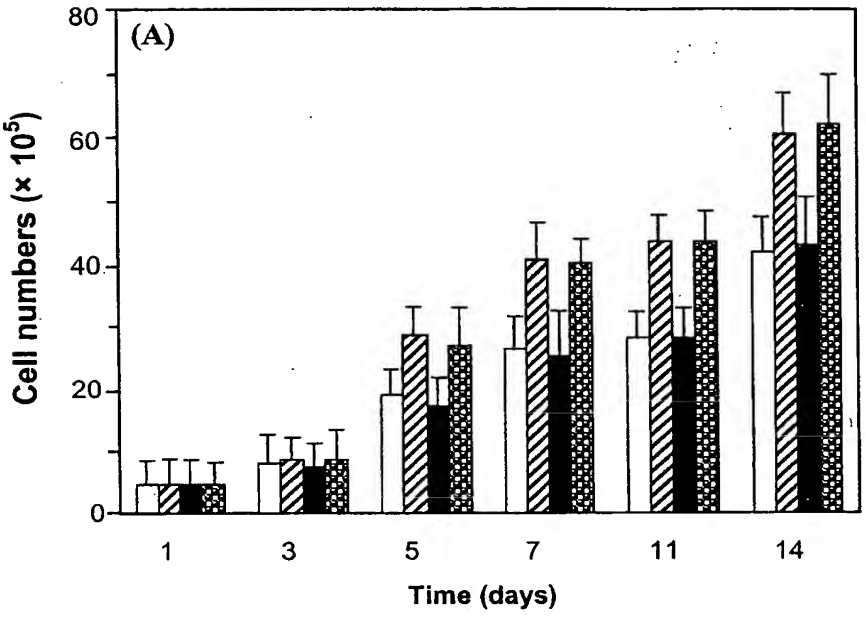

(B)
Ethanol (mM)
25
20
15
10
5
0
0
20
40
60
80
Degradation time (days)

Fig. 2B

Fig. 3A


(A)
Cell numbers (× 10^5)
80
60
40
20
0
1
3
5
7
11
14
Time (days)

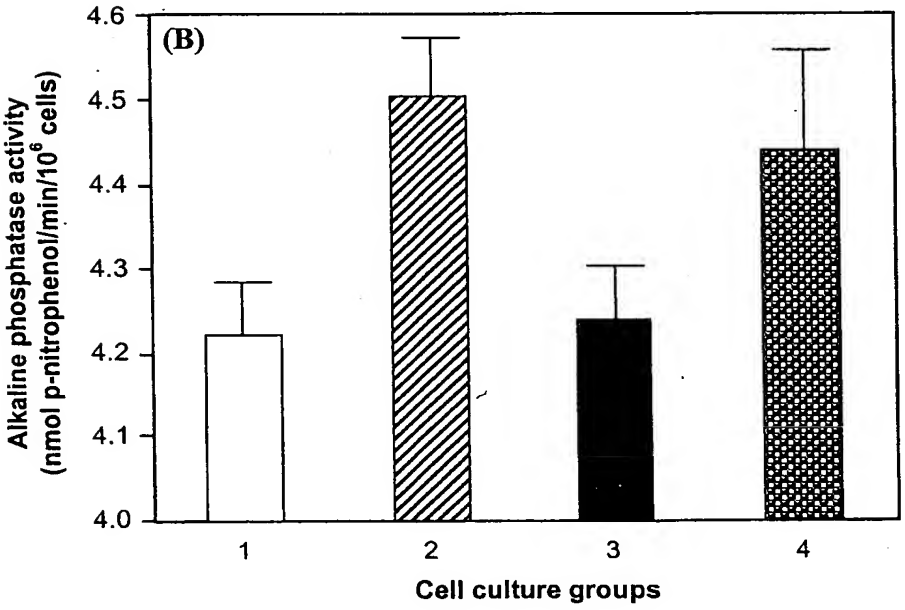

(B)
Alkaline phosphatase activity
(nmol p-nitrophenol/min/10^6 cells)
4.6
4.5
4.4
4.3
4.2
4.1
4.0
1
2
3
4
Cell culture groups

Fig. 3B

Lane	GAPDH				Collagen I				TGF-β1			
	Intensity (7 days)	%	Intensity (14 days)	%	Intensity (7 days)	%	Intensity (14 days)	%	Intensity (7 days)	%	Intensity (14 days)	%
1	1609	100.00	1741	100.00	865	100.00	299	100.00	1516	100.00	1422	100.00
2	1614	100.31	1730	99.37	1254	144.97	416	139.13	1915	126.32	2014	141.63
3	1580	98.20	1754	100.75	790	91.33	205	68.56	1480	97.63	1378	96.91
4	1628	101.18	1767	101.49	1131	131.75	409	136.79	2028	133.17	1828	128.55

Fig. 4A

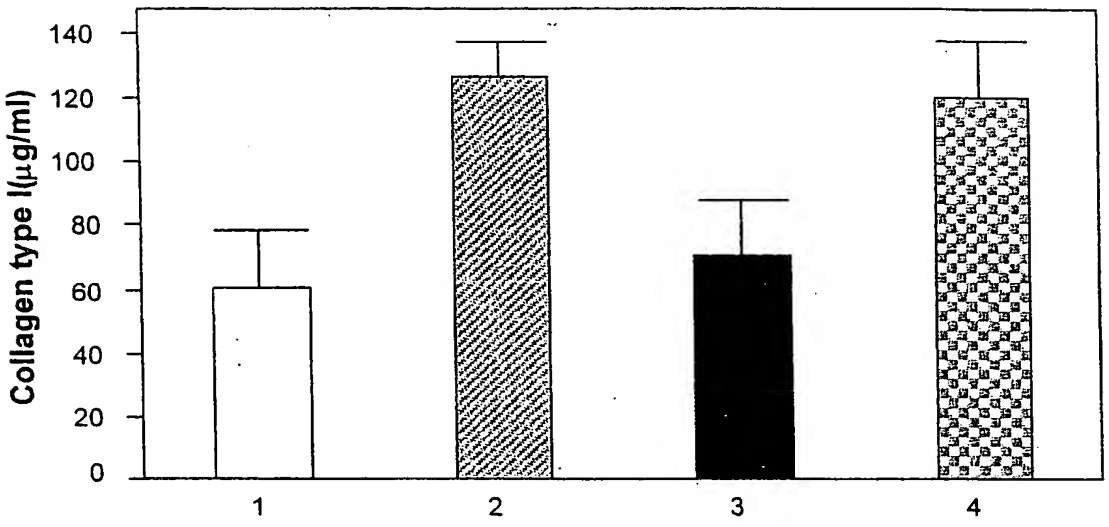


Fig. 4B

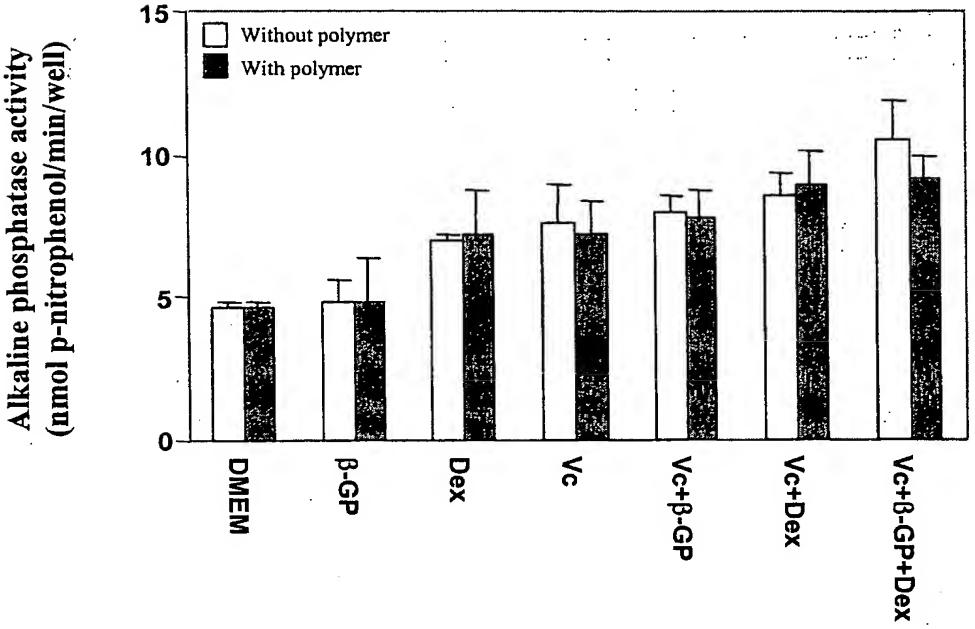
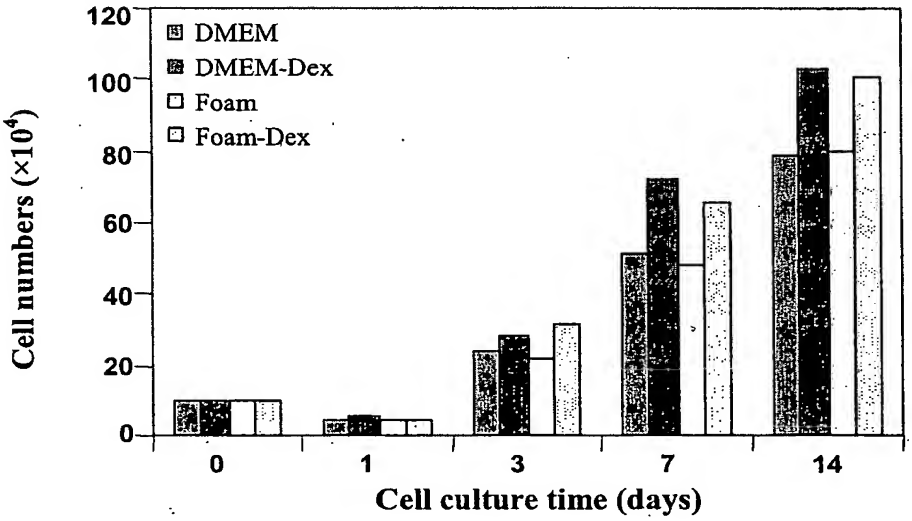

Alkaline phosphatase activity
(nmol p-nitrophenol/min/well)
15
10
5
0
Without polymer
With polymer
DMEM
β-GP
Dex
Vc
Vc+β-GP
Vc+Dex
Vc+β-GP+Dex

Fig. 5

Fig. 6


DMEM
DMEM-Dex
Foam
Foam-Dex
Cell numbers (×10⁴)
120
100
80
60
40
20
0
0
1
3
7
14
Cell culture time (days)

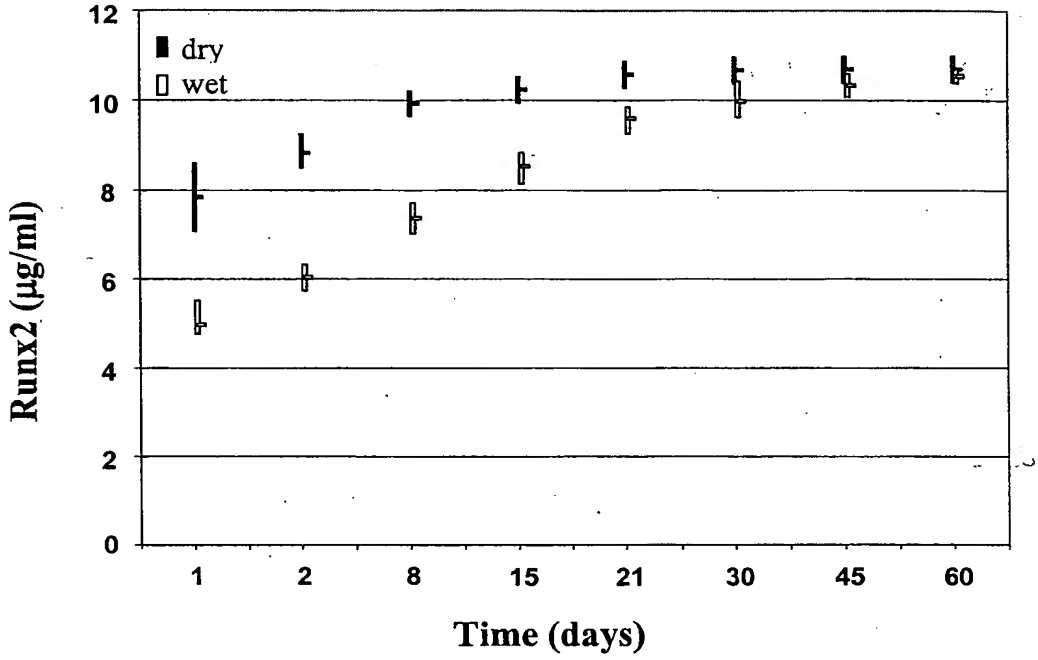
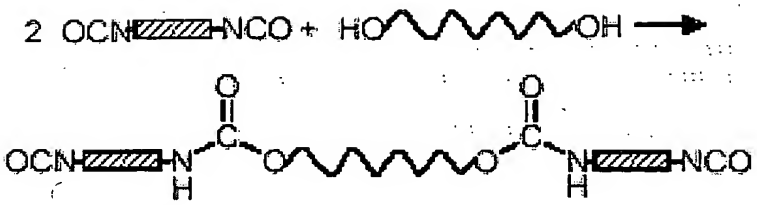
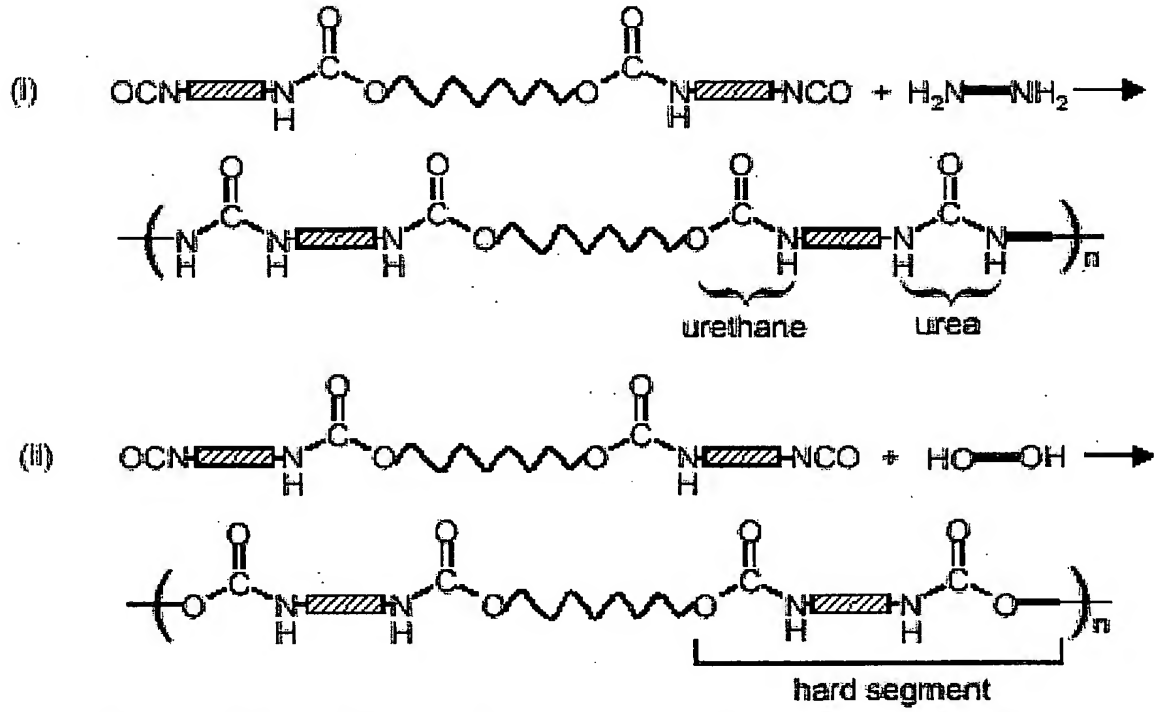


Fig. 7

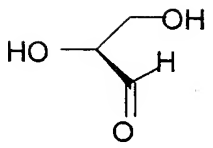


(a) An NCO-terminated prepolymer prepared by reacting two moles of diisocyanate with one mole of a long-chain hydroxyl-terminated diol.

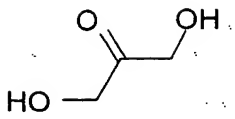


(b) Polyurethanes prepared by reacting equimolar quantities of an NCO-terminated prepolymer with (i) a short-chain diamine chain extender (yielding urea linkages) and (ii) a short-chain diol chain extender (yielding urethane linkages). The diisocyanate and chain extender comprise the hard segment.

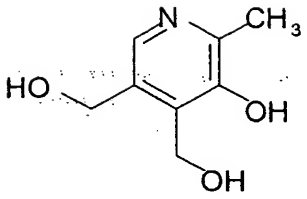
Fig. 8.



L-glyceraldehyde

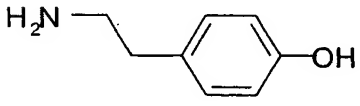


dihydroxyacetone

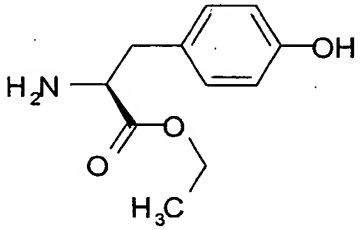


pyridoxine

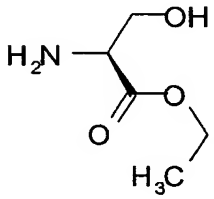
Fig. 9A Natural metabolites with diol functionality yielding urethane diols when coupled with a diisocyanate.



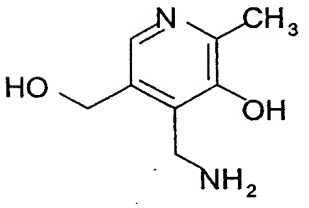
tyramine



L-tyrosine ethyl ester



L-serine ethyl ester

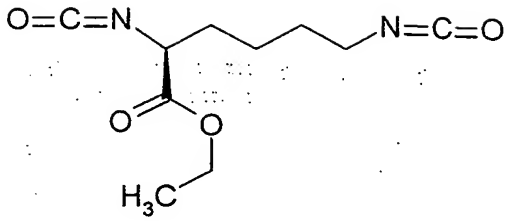


pyridoxamine

Fig. 9B Natural metabolites with amine and hydroxyl functionality yielding urea diols when coupled with a diisocyanate.

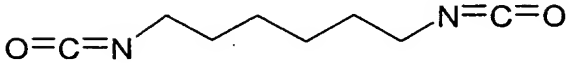
(a)

butane diisocyanate

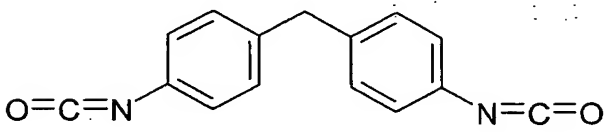


L-lysine ethyl ester diisocyanate

(b)

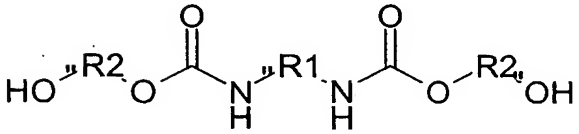


hexamethylene diisocyanate (HDI)

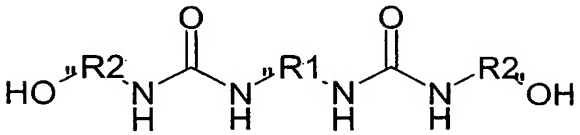


4,4'-methylenebis(phenylisocyanate) (MDI)

Figs. 10A and 10B.



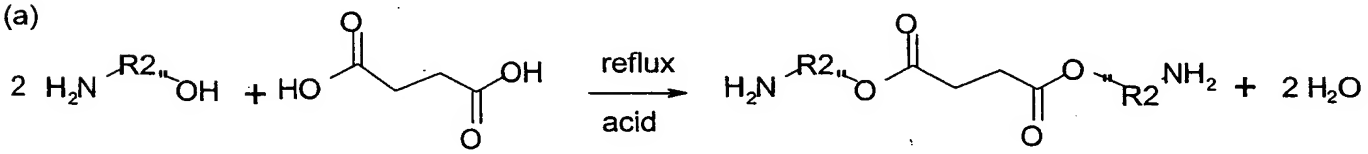
(a) diurethane diol



(b) diurea diol

Figs. 11A and 11B

(a)



(b)

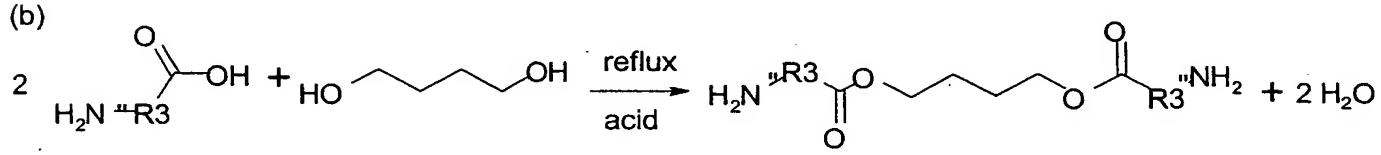
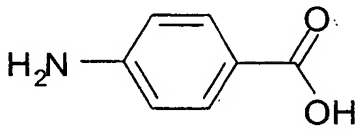
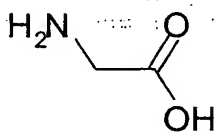


Fig. 12A and 12B.



p-aminobenzoic acid



glycine

Fig. 13.

R

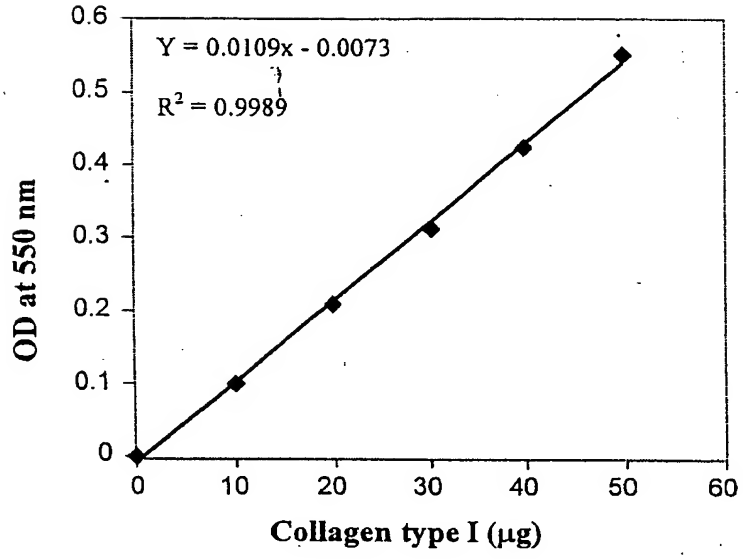

Y = 0.0109x - 0.0073
R2 = 0.9989
OD at 550 nm
0.6
0.5
0.4
0.3
0.2
0.1
0
0
10
20
30
40
50
60
Collagen type I (µg)

Fig. 14